

DEC 07 2006

REMARKS

Claims 21-84 and 86-96 are pending in the application. Claims 1-20, 36-40, 44-47, 52-54, 57-74, 79, 80, 86-93 and 96 have been withdrawn from consideration. Claims 1-20 and 85 are hereby canceled, without prejudice, as directed to a non-elected invention. Claims 21-26, 28-35, 41-43, 48-51, 55, 56, 75-78, 94 and 95 were rejected. Claims 27 and 81-84 were objected to.

Claim 52 was amended in response to the May 30, 2006 Restriction Requirement to correct a clerical error in its dependency. The claim properly depends from claim 50 and thus is submitted to fall within Group II, the elected group, for restriction purposes. Acknowledgement of this amendment and consolidation of claim 52 with Group II is respectfully requested.

The Examiner's courtesy in granting a telephone interview on December 5, 2006 is gratefully acknowledged. The rejections were discussed and Applicant's undersigned representative provided an explanation of the distinguishing features of the present claims or the inapplicability of the cited documents, as discussed below.

Claim Rejections under 35 U.S.C. § 102

Claims 21-26, 28-35, 41-43, 48-51, 55, 56, 75-78, 94 and 95 were rejected under 35 U.S.C. §102(e) as being anticipated by commonly assigned co-pending Application US 2005/0100793 by De Jonghe et al. ("De Jonghe"). De Jonghe was filed after the present application, however it claims priority to a provisional application, 60/518,948, with a filing date that precedes the filing date of the present application and is presumed to be cited under §102(e) on that basis. Claims 21-26, 30-35, 41-43, 48-51, 55, 56, 75-78, 94 and 95 were rejected under 35 U.S.C. §102(e) as being anticipated by commonly assigned co-pending Application US 2004/0197641 by Visco et al. ("Visco"). These rejections are respectfully traversed.

Independent claim 21 recites in relevant part:

A battery cell, comprising: ...

an ionically conductive protective architecture on a first surface of the anode, the architecture comprising,

an active metal ion conducting separator layer comprising a non-aqueous anolyte, the separator layer being chemically compatible with the active metal, and in contact with the anode, and

a substantially impervious ionically conductive layer chemically compatible with the separator layer and the cathode structure, and in contact with the cathode structure.
[emphasis added]

The other pending claims depend directly or indirectly from independent claim 21 and thus incorporate this recitation. The recited "non-aqueous anolyte" is a liquid or gel phase component of the architecture's separator layer (see, e.g., page 14, line 16 to page 15, line 15 of the specification where the non-aqueous (organic) anolyte and some of the advantages of an anode protective architecture incorporating it, are described).

De Jonghe describes electrolytic cells having anode protective structures developed by PolyPlus Battery Company, the common assignee of the applications. In the paragraph [0061] cited in the Office Action, two different types of anode protective structures are described. Both of these anode protective structures include a substantially impervious ionically conductive "second" layer, as described in paragraph [0065]. However, the structures differ in the "first" layer of the protective structure that is adjacent to the "second" layer: While one type of protective structure has a solid state first layer (e.g., "composed, in whole or in part, of active metal nitrides, active metal phosphides, active metal halides or active metal phosphorus oxynitride-based glasses"), the other has a first layer that includes a non-aqueous anolyte (e.g., "a semi-permeable membrane separator impregnated with a non-aqueous liquid or gel, for example, a micro-porous polymer impregnated with a liquid or gel phase"). It is the disclosure pertaining to this latter type of anode protective structure (incorporating a liquid or gel phase) on which the rejection relies.

However, De Jonghe is only available as a reference against the present application under §102(e) to the extent that the provisional application 60/518,948 from which De Jonghe claims priority discloses the subject matter relied upon in the rejection. Provisional application 60/518,948 does not disclose the recited separator layer comprising a non-aqueous anolyte. Thus, it is respectfully submitted that De Jonghe is not available as a §102(e) reference against the present application for this aspect. Accordingly, it is respectfully submitted that De Jonghe does not anticipate the present claims and withdrawal of the §102(e) rejection on this basis is respectfully requested.

Visco describes battery and other electrochemical cells having anode protective layers, but also does not describe the recited separator layer comprising a non-aqueous (liquid or gel) anolyte. Accordingly, it is respectfully submitted that Visco also does not anticipate the present claims, and withdrawal of the §102(e) rejection on this basis is also respectfully requested.

Double Patenting

Claims 21, 30-35, 41-43, 48-51, 55, 56, 75-78, 94 and 95 were provisionally rejected on the ground of obviousness-type double patenting as being unpatentable over claims 1-11, 17, 44, 48-53, 56-60, 62 and 66-69 of Visco. This rejection is respectfully traversed.

As noted above, the presently pending claims recite, in relevant part, "an ionically conductive protective architecture on a first surface of the anode, the architecture comprising an active metal ion conducting separator layer comprising a non-aqueous anolyte..." [emphasis added]. The noted claims of Visco recite battery and other electrochemical cells having anode protective layers. However, the claims lack any teaching or suggestion of the recited architecture with a separator layer comprising a non-aqueous (liquid or gel) anolyte on the anode. Accordingly, it is respectfully submitted that the presently pending claims are not rendered obvious by the claims of Visco, and withdrawal of the obviousness-type double patenting rejection on this basis is respectfully requested.

Claims 21-35, 41-43, 48-51, 55, 56, 75-78, 94 and 95 were provisionally rejected on the ground of obviousness-type double patenting as being unpatentable over claims 23-25 of commonly assigned co-pending Application 11/245,472 (US 2006/0078790) by Nimon et al. ("Nimon"). The filing of a Terminal Disclaimer would obviate this rejection. However, Nimon is a later filed application. Thus, it is submitted that any such Terminal Disclaimer ultimately found necessary would be more appropriately filed in the later filed application. In view of the later filing date of the cited application, the Examiner indicated in the interview of December 6, 2006 that this provisional double patenting rejection would be withdrawn if it alone prevented issuance of a Notice of Allowance for the present application. Accordingly, without addressing the merits of the rejection, a further response to this rejection is deferred pending the Examiner's consideration of this Response.

Species Election

The telephone election of species noted in the Office Action is acknowledged and confirmed. It is understood that upon allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim. As noted in the Restriction Requirement mailed May 30, 2006, claim 21 is currently generic.

Allowable Subject Matter

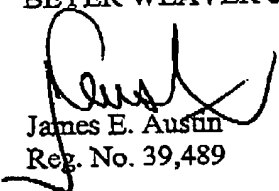
Applicants gratefully acknowledge the indication of allowability of claims 27 and 81-84. However, for the reasons noted above, Applicants believe that all the pending claims are

allowable, so these claims have not yet been amended to independent form pending the Examiner's consideration of this Response.

Conclusion

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below. If any fees are due in connection with the filing of this amendment, the Commissioner is authorized to charge such fees to Deposit Account 500388 (Order No. PLUSP040).

Respectfully submitted,
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